

REMARKS

This application has been carefully reviewed in light of the Office Action dated November 20, 2003. Claims 1 to 8 and 10 to 17 are in the application, of which Claims 1 and 10 are independent. Reconsideration and further examination are respectfully requested.

Turning first to a formal matter, the drawings were objected to for not including the reference numeral (7) pertaining to a wafer boat, as described on line 24 of page 7 and line 4 of page 8 in the specification. A Letter Transmitting Formal Drawings accompanies this Amendment, with which substitute drawing sheets are being submitted. In the substitute drawing sheets, the reference numeral (8) was changed to (7) in Figures 3 and 4. In addition, the specification was amended to maintain consistency. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

In this regard, the cover page of the Office Action does not indicate that the substitute drawing filed with the Letter Transmitting Formal Drawings dated August 22, 2003 was accepted by the Examiner or objected to. Since the substitute drawing was for a different figure than the ones objected to in the present Office Action, it is assumed that the substitute drawing was acceptable. However, if this assumption is incorrect, clarification is respectfully requested for the status of the drawing.

Claims 1 to 8 and 10 to 17 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,820,683 (Ishii) in view of U.S. Patent No. 5,378,912 (Pein). The rejection is respectfully traversed.

According to Claim 1, the present invention concerns an annealing method for annealing an SOI substrate. The method includes the steps of holding the SOI substrate in a reducing atmosphere containing hydrogen by a holding portion having a surface

formed from silicon, and annealing the substrate. The holding portion is a member having a silicon film thereon or a member formed from single-crystal silicon or polysilicon.

According to Claim 10, the present invention concerns an annealing method for annealing an SOI substrate. The method includes the steps of holding the SOI substrate in a reducing atmosphere containing hydrogen by a holding portion, and annealing the substrate. The holding portion has no silicon carbide formed by sintering and has a surface formed from silicon carbide deposited by CVD.

As Applicants understand the applied art, none of it, alone or in combination, discloses or suggests the foregoing methods.

Ishii is seen to merely disclose a boat body that is made of quartz or silicon carbide with a surface formed from silicon carbide deposited by CVD.

Pein is seen to merely describe a lateral SOI device.

Both Ishii and Pein, either singly or in combination, are not seen to teach or suggest the present invention. In particular, neither Ishii nor Pein makes any mention of the holding and annealing of an SOI substrate in a reducing atmosphere containing hydrogen.

In addition, with regards to the annealing method recited in Claim 1, both Ishii and Pein are not seen to disclose or suggest the feature of a holding portion having a silicon film thereon or a holding portion that is formed from single-crystal silicon or polysilicon. On page 3, the Office Action alleges that Ishii discloses a holding portion having “a surface formed from silicon” and that it is “formed from single-crystal silicon or polysilicon.” Applicants disagree and point out that Ishii’s silicon carbide is different from silicon, single-crystal silicon or polysilicon. As discussed in the present application, Applicants found that a holding portion formed from single-crystal silicon or polysilicon with a surface formed from silicon resulted in reduced HF defects. Meanwhile, the present

inventors also found that a holding portion or boat like the one disclosed in Ishii, made of silicon carbide and having a surface coated with silicon carbide, resulted in metal contamination, which is a potential cause for HF defects. Furthermore, Ishii is not seen to make any mention of silicon, crystal silicon or polysilicon as materials for forming holding portions or boats.

With regards to the annealing method recited in Claim 10, both Ishii and Pein are not seen to disclose or suggest a holding portion that contains no silicon carbide formed by sintering. On page 4, the Office Action alleges that Ishii discloses a holding portion “which contains no silicon carbide formed by sintering.” However, Ishii is not seen to make specific mention of a holding portion that contains no silicon carbide formed by sintering. As discussed in the present application, the present inventors have found that a boat formed from silicon carbide by sintering becomes a source of metal contamination, which is a potential cause for HF defects. Although Ishii is seen to disclose the use of silicon carbide as a material for a holding portion or boat, it makes no mention of the specific prohibition against the use of silicon carbide formed by sintering. Indeed, Ishii makes no mention of metal contamination or HF defects at all.

In view of the foregoing, withdrawal of the § 103(a) rejection is respectfully requested.

No other matters being raised, it is believed the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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